Digital world meets in Singapore

Third CAD/CAM and Digital Dentistry International Conference to open at Suntec in December

By DTI

SINGAPORE: After two successful congresses, the Centre for Advanced Professional Practices (CAPP) in Singapore is inviting dental professional-als to its third Asia Pacific edition of the CAD/CAM and Digital Dentistry International Conference. The event will be held from 3 to 5 December at the Suntec Singapore Convention and Exhibition Centre and present the latest developments and innovations in the field.

Organised in partnership with the Singapore Dental Association and the American Academy of Implant Dentistry, the show is aimed at providing an overview of the use of digital technology in dentistry and its integration into treatment processes and the practice workflow. The organisers have invited prominent experts from around the world to Singapore to give presentations on a wide range of topics, including computer-guided implantology, intra-oral scanning, and smile design.

Parallel sessions aimed at dental technicians and laboratory owners will also be held. Participants will be able to earn up to 28 CE points by attending the programme. As a complement to the extensive education offering, international dental suppliers will be exhibiting all of the very latest products, technologies, materials and services in the industry. These will include Planmeca, 3Shape, Ivoclar Vivadent, VITA, Sirona, Amann Girrbach, Wieland, and other companies.

While they have been improved over time, glass ionomer cements (GIC) are still lacking in toughness and other requisite properties to be considered the material of choice for permanent implants, for example. This could soon change, according to scientists from England and Wales, who have recently gained new insights into how the material sets inside the tooth in real time.

Using intense beams of neutral subatomic particles from the Science and Technology Facilities Council’s neutron and muon source at the Rutherford Appleton Laboratory near Oxford, they looked at the surface between the hard glass particles and surrounding polymer as the strength of the cement develops. Instead of the material hardening continuously, they found what they termed “sweet points”, at which the material suddenly regains elasticity as it approaches the toughness of the tissue and then hardens indefinitely.

Cosmetic dentistry market

According to a new report published by market research firm MarketsandMarkets, the global market for cosmetic dentistry is expected to grow at a compound annual rate (CAGR) of 6.8 per cent from 2015 to 2020 to reach US$22.4 billion by 2020. Owing to the intensifying focus on technological innovations and the increasing trend of research and development investments, various new products, such as dental implants and equipment, are being launched on the cosmetic dentistry market and are expected to propel further market growth. However, a lack of reimbursement and the high cost of dental imaging systems are expected to restrain the growth of this market to a certain extent, the reports state.

World Oral Health Day 2016

The FDI World Dental Federation and Dental Tribune International have renewed their collaboration agreement for the 2016 World Oral Health Day campaign. DTI will be serving as the official WOHD16 media partner and help promote awareness of the importance of oral health on a global scale.

Singapore Service extended

The National University of Singapore has incorporated oral health checks for the first time in its annual Public Health Service screenings. Sixty dental students from the university joined the programme in order to provide free dental screenings and oral health education to residents in need.

GICs decoded

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ORTHODONTICS
By Dr. Hannes Thoma, London, spectrum of orthodontic techniques to treat a range of malocclusions.

BISPHOSPHONATES
By Dr. Mark Carlin, Hong Kong, theoretical and experimental data suggest that local administration of the drugs is safe and effective.

TALKING TEETH
By Dr. Stanislav Cicha, Hong Kong, discussing the emergence and future implications of short-term orthodontics in general practice.

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Distinguished by innovation
Second-hand smoke increases risk of tooth decay in children

Researchers from the Graduate School of Medicine and Public Health at Kyoto University analysed data for 76,920 children born between 2004 and 2010. All the children attended routine health check-ups at 0, 4, 9 and 18 months and at 3 years of age. Information on second-hand smoke exposure from pregnancy to 3 years of age and other lifestyle factors, such as dietary habits and oral care, was obtained through questionnaires.

The findings showed that 55.3 per cent of children in the study were exposed to second-hand smoke by family members in the household at 4 months and 6.8 per cent had evidence of tobacco smoke exposure. The latter was defined as smoking in front of the infant by the researchers. Overall, 12,779 incidents of dental caries, mostly decayed teeth, were found in the study group.

Compared with having no smoker in the family, exposure to tobacco smoke at 4 months of age was associated with an approximately two-fold increased risk of caries at age 3. The risk of caries was also increased among those children exposed to household smoking, whereas the effect of maternal smoking during pregnancy was not statistically significant.

Although these findings cannot establish causality, they support extending public health and clinical interventions to reduce second-hand smoke, the researchers concluded.

Health statistics show that the level of dental caries in primary dentition remains high in developed countries. In Japan, one-fourth of all 3-year-old children experience caries, whereas 20.5 per cent of children aged 2 to 5 are affected in the US, according to the researchers.

The study, titled "Second-hand smoke and incidence of dental caries in deciduous teeth among children in Japan. Population based retrospective cohort study", was published on 21 October in The BMJ.
New method to preserve carious teeth

By DTI

Dental decay is one of the most prevalent chronic diseases in New Zealand and the rest of the world. Now, researchers at the University of Otago have developed a new method that could help preserve caries-infected teeth and prolong the life of dental fillings in the future.

While caries inhibiting products use silver that can cause significant discoloration of teeth, the new technology uses specifically formulated, non-staining silver particles to arrest caries and render teeth more resistant to decay. According to the researchers, the product has to be applied after caries removal but before filling. It diffuses into the tooth, where it can kill remaining bacteria that may cause further decay.

“We believe that our non-staining formula will be an important step forward for oral care and public health,” said Dr Don Schwass, senior lecturer and prosthodontist at the university’s Department of Oral Rehabilitation. “The result will be that recurrent caries will be significantly reduced and dental fillings will last longer, providing both economic and health benefits.”

Otago Innovation, the university’s technology transfer office, has recently licensed the rights to this formula to a global dental materials manufacturer for further product development.

Gagging for evidence

By DTI

The use of sedatives, acupuncture or behavioural therapies are just some of the strategies recommended to dental practitioners for managing the gagging reflex that can occur in patients during treatment. A wide-scale review conducted by clinicians from the Melaka Manipal Medical College’s Department of Dentistry in Melaka and published by the Cochrane Oral Health Group in Manchester has recently found no evidence that any of these strategies are in effective at preventing or managing the condition.

After a search for randomised clinical trials evaluating strategies for managing the gagging reflex, the researchers only found one study, from Brazil, on the effects of acupuncture at Point P6 versus placebo acupuncture, to be eligible for the review. Of the other 256 studies they took into consideration, none qualified to be included in the paper owing to bias, irrelevance and several other reasons.

For their review, the Malay researchers consulted Cochrane’s registration database and other medical search engines for clinical trials spanning from 1980 to the present day. Owing to the inconclusive results, they recommended that more studies be conducted on both pharmacological and non-pharmacological interventions, with special emphasis on behavioural modification techniques. Future research should also take into account a more varied population range and factors such as patient satisfaction, they stated.

Moreover, more comparable studies are needed in contrast to only trials involving a dummy or a placebo technique.

Although little is known about its prevalence, an exaggerated gag reflex during dental treatment is a problem encountered by many dental practitioners, often during denture try-in sessions. The response can be triggered by a variety of procedures, including third molar removal or intra-oral image taking.

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